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EXAMINER

LEE, MARINA

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/747,659	Applicant(s) STYLES ET AL.	
	Examiner MARINA LEE	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment and response dated March 31, 2008 in responding to the Office Action of October 31, 2007 provided in the rejection of all pending claims 1-17.

Claims 1-14 and 16 have been amended.

Claim 17 has been cancelled.

None of the claims has been newly added.

Thus, claims 1-16 are still pending in this application and which have been fully considered by the Examiner.

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Prior Art's Arguments – Rejections

3. Applicant's arguments filed on March 31, 2008, especially on pages 8-10, with respect to new claim limitation, "... after compiling the source code, receiving an instruction for a debugger to debug the binary file; after receiving the instruction for the debugger, using the extracted information in the debug file, locating the source file and associated with the binary file; and thereafter debugging the binary file with full source code support by correlating lines of the source code file with binary instructions in the binary file, the source code file including only the source code originally used to compile the binary file" are currently recited in claim 1, with the similar amended recitation regarding to claim 11, have been fully considered but they are moot in view of new ground (s) rejections as will be fully addressed under the *Claim Rejections*— starting from item (4) bellows.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-16 are rejected under 35U.S.C. 103(a) as being unpatentable over Baisley et al., (U.S. Patent No. 6,106,574 made of record— hereinafter Baisley) in view of Haikin (U. S. Patent No. 6,757,893 B1 of record).

As per claims and 11, Baisley discloses a method for associating original source code with binary code for debugging the binary code, the method comprising:

storing a source code file (*source files 22, Fig. 1, which contains program elements (e.g., function 23...), -- See at least col. 5: 14-17 and col. 1: 24-28*), the source code file including source code and being associated with a version (*e.g., source file name – see at least col. 5: 28-30 with emphasis added*);

compiling the source code file into a binary file (*e.g., binary file 36, Fig. 1*) – (*e.g., compiler 20 convert the source files 22 into objects 30-34, Fig. 1, which represent machine/binary instruction – see at least col. 5: 17-22 with emphasis added*) ;

while compiling the source code file, extracting information (*e.g. table mapping instructions to source code location*) that identified a location of the source code file and the version (*e.g., source file name*) associated with the source code file – *see at least col. 5: 20-30* ;

storing the extracted information in a debug file associated with the binary file – *see at least col. 5: 39-42 with emphasis added*;

after compiling the source code file, receiving an instruction for a debugger to debug the binary file – *see at least col. 5: 39-51*;

after receiving the instruction for the debugger, using the extracted information in the debug file, locating the source code file and associate it with the binary file – (*e.g., a debugger uses table to find the source location such as*

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source file name and a line number – see at least col. 5: 45-51 & 28-30 with emphasis added); and

thereafter debugging the binary file with full source code support by correlating lines of the source code file with binary instructions in the binary file, the source code file including only the source code originally used to compile the binary file (*e.g., a debugger uses table to find the source location such as source file name and a line number – see at least col. 5: 45-51 & 28-30 with emphasis added*).

It is noted that Baisley does not explicitly disclose storing a source code file (*source files 22, Fig. 1, which contains program elements (e.g., function 23...), -- See at least col. 5: 14-17 and col. 1: 24-28) on a server.*

However, Haikin, in an analogous art, teaches a software source code version control system for use during the development and maintenance of a software system by multiple software developer in which historical version tracking is maintained for all source code on a line-by-line basis on central server 20, Fig. 1, without requiring excessive storage area, in which source code can be accessed and modified by more than one software developer at a time, in which historical version tracking of a broad functional changes is provided and in which quick and transparent access is provided to each version of the source code (see *Haikin, at least col. 3: 21-31, col. 7: 23-42, and col. 8: 23-59*).

It would have been obvious to one ordinary skill in the art at the time the invention was made to use the source code version control system of Haikin in

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source code files 22 (fig. 1) of Baisley for providing quick access and maintaining of the historical version for all source code without requiring excess storage space as taught in Haikin (*e.g.*, *col. 3: 1-18*).

It is further to note that, Baisley does not explicitly disclose *a computer-readable storage medium* having computer executable instructions stored thereon that, when executed by a processor, implemented above method. However, Haikin discloses a computer storage medium (*e.g.*, removable CD-ROM media – see at least *col. 7: 36*).

It is well known in the computer art that such method step can be implemented as computer program and be known, commonly practiced and/or stored on the removable CD-ROM media of Haikin for implemented the above method. Thus, it would have been obvious in view of reference teachings above.

Further regarding to claim 11, Haikin also discloses a system (*e.g.*, *workstation 30 (Fig. 3)* – see at least *col. 8: 46-50*) for implementing the above method.

As to claim 12, modified Baisley with Haikin discloses further comprising a source server (*e.g.*, *source code storage 270 (fig.2)*— see *Haikin at least col. 8: 24-45*) arranged to extract the information (*e.g.*, *table mapping of Baisley*) at debug time, retrieve the source code files from the version control server, and place the source code files in a directory accessible by the debugger – (*e.g.*, *a debugger uses table to find the source location such as source file name and a line number* – see *Baisley, at least col. 5: 45-51 & 28-30 with emphasis added*).

As to claim 2, modified Baisley with Haikin discloses further comprising:

extracting the information from the debug file –see *Baisley, at least col. 5: 39-42 with emphasis added*;

requesting the source code associated with the version from the server via the information (see *Baisley, at least col. 5: 20-30*);

placing the source code in a directory used by a debugger to debug the executable code –see *Baisley, at least col. 5: 39-42 with emphasis added*; and

executing the debugger and matching an instruction in the executable code to an instruction in the source code (e.g., a debugger uses table to find the source location such as source file name and a line number – see *Baisley, at least col. 5: 45-51 & 28-30 with emphasis added*).

As to claim 3, modified Baisley with Haikin also discloses wherein the source code file includes programming statements (*source files 22, Fig. 1, which contains program elements (e.g., function 23...), -- See Baisley, at least col. 5: 14-17 and col. 1: 24-28*), which, when compiled, produce executable code in the form of the binary file – (e.g., *compiler 20 convert the source files 22 into objects 30-34, Fig. 1, which represent machine/binary instruction(e.g., binary file 36, Fig. 1) – see Baisley, at least col. 5: 17-22 with emphasis added*)

As to claim 4, modified Baisley with Haikin further discloses wherein the server comprises a version control server (e.g., version control server module 280, Fig. 2) that stores a plurality of versions of the source code – *See Haikin, at least col. 8: 38-42*.

As per claims 5 and 16, modified Baisley with Haikin also discloses wherein the information comprises a name of the server (*e.g., server 20, Fig. 2*), a port of the server at which the server may be accessed to access the source code (*e.g., workstation 30 is making request to access the source code from server 20 via LAN 10 -- a port of server is inherent*), a path to the source code (*e.g., memory address location of the source code*), and a numeric value that indicates a version number (*version of the request source code (i.e. 2.0 with emphasis added)*) of the source code – See Haikin, at least col. 7: 20-42, col. 8: 38-42, col. 10: 26-30, and col. 16: 12-50 with emphasis added.

As to claim 6, modified Baisley with Haikin also discloses wherein the binary file includes code that was compiled from a plurality of source code files (*e.g., FILE1, FILE 2...*), each source code file associated with a version (*e.g., file name such as FILE 1, FILE 2..*) – See Baisley, at least col. 8: 38-67 and col. 9: 1-42 with emphasis added.

As to claim 7, modified Baisley with Haikin also discloses further comprising obtaining additional information that identified the version associated with the plurality of source code files to the server and storing the additional information in the debug file – See Haikin, at least col. 7: 20-42, col. 8: 38-42, col. 10: 26-30, and col. 16: 12-50 with emphasis added.

As per claims 8 and 14, modified Baisley with Haikin further discloses wherein the debug file comprises a program database file (*e.g., source code storage 270 (fig.2)*) — see Haikin at least col. 8: 24-45) that is separate from the

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executable code (e.g., *binary file 36 (fig. 1) contains machine code instruction – see Baisley at least col. 5: 17-22*).

As to claim 9, modified Baisley with Haikin also discloses wherein the debug file comprises a portion of an executable file (e.g., machine instruction) that includes the executable code – *see Baisley, at least col. 5: 17-22 & 42-44*.

As to claim 10, modified Baisley with Haikin disclose further comprising iterating each source code file that is part of a compilation, each source code file having a version (*see Baisley, at least col. 5: 14-22*);

obtaining information that identified the version of each source code file to the server and a local name of each source code file – *See Haikin, at least col. 7: 20-42, col. 8: 38-42, col. 10: 26-30, and col. 16: 12-50 with emphasis added*;

storing the information in a lookup table (e.g. *table mapping instructions to source code location -See Baisley, at least col. 5: 20-30*); and

extracting, from the binary file, local names of the source code files that were used in compiling the binary file – *e.g., a debugger uses table to find the source location such as source file name and a line number – see Baisley, at least col. 5: 45-51 & 28-30 with emphasis added*; and

for each source code file that was used in compiling the binary file, looking up the version in the lookup table using the local name of the source code file – *See Baisley, at least col. 8: 38-67 and col. 9: 1-42 with emphasis added*.

As to claim 13, modified Baisley with Haikin discloses wherein the source server comprises a component of the debugger (e.g., *table mapping – see Baisley, at least col. 5: 45-51 & 28-30 with emphasis added*).

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As to claim 15, modified Baisley with Haikin discloses wherein the debugger is arranged to find the source code files in the directory and is unaware of the version control server (e.g., *e.g., a debugger uses table to find the source location such as source file name and a line number – see Baisley, at least col. 5: 45-51 & 28-30 with emphasis added*).

Conclusion

6. The prior art made of record and not relied upon, which is cited on (form 892) is considered pertinent to application disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Lee whose telephone number is (571) 270-1648. The examiner can normally be reached on M-F (11:00 am to 7:30 pm) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

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free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

/M. L. /

Examiner, Art Unit 2192

/Tuan Q. Dam/

Supervisory Patent Examiner, Art Unit 2192